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EXAMINER	
SHAH, AMEE A	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/679,901	EL-HAJ, MOHAMMAD	
	Examiner	Art Unit	
	Amee A. Shah	3625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-7 and 9-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-7 and 9-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 4-7 and 9-40 are pending in this action.

Examiner Note

Examiner cites particular pages, columns, paragraphs and/or line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1, 4-7, 9-15 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tremain, US 2002/0069369 A1 (hereafter referred to as "Tremain") in

view of Bandhole et al., US 2002/0171678 A1 (hereafter referred to as "Bandhole") and further in view of Nanja, US 7,065,637 B1.

Referring to claim 1. Tremain teaches an apparatus for providing virtual computing services to subscribers on a subscription basis, said apparatus comprising a server computer operable to provide first computing services to a first subscriber of a plurality of subscribers enrolled in a subscription-based services program for the receipt of computing services (¶¶0043-0044) and to provide second computing services to a second subscriber of said plurality of subscribers enrolled in said subscription-based services program for the receipt of computing services (¶¶0043-0044), wherein said server computer comprises a first virtual non-volatile storage associated uniquely with said first subscriber to provide said first computing services and a second virtual non-volatile storage associated uniquely with said second subscriber, said first virtual non-volatile storage being configurable according to said first subscriber, and said second virtual non-volatile storage being configurable according to said second subscriber to provide said second computing services (Fig. 4 and ¶¶0043-0044, 0174 and 0196-0201).

Tremain does not teach the server computer outputting a user interface having one or more user selectable portions to enable subscriber selection of configuration options for respective computing services comprising at least a selection of virtual non-volatile storage capacity from at least two virtual non-volatile storage capacity configuration options, and a selection of an operating system from at least two operating system options, and the virtual non-volatile storages associated with each subscriber configured according to the option selected by the subscriber, said server computer operable to install the selected operating system to a virtual non-volatile storage having the selected storage capacity to provide respective computing

services, wherein the first non-volatile storage is configured according to a first selected virtual non-volatile storage capacity and a first selected operating system based upon configuration options selected by said first subscriber, and the second virtual non-volatile storage configured according to second selected virtual non-volatile storage capacity and a second selected operating system based upon configuration options selected by said first subscriber.

Bandhole, in the same field of endeavor and/or pertaining to the same issue, teaches a system to provide virtual computing wherein the customer can choose the components and configuration for the computing environment from presented options comprising at least a virtual non-volatile storage capacity configuration and a plurality of operating systems, and wherein the virtual non-volatile storages are configured according to the selected options (Fig. 4 and ¶¶0014, 0033, 0034, 0051, 0054 and 0055 – note the virtual computing is the "dynamic computing environment" or "DCE"). Bandhole teaches that an interface can be used to select the options, which can include storage and operating systems (¶¶0028 and 0054) and refers to the related application of Nanja. Nanja teaches a server computer operable to output an interface having one or more selectable portions to enable subscriber selection of configuration options for respective computing services comprising at least selection of non-virtual storage from at least two configuration options and selection of an operating system from an least two system options and installing the selected operating system to a non-virtual storage capacity having the selected storage capacity (Figs. 2, 5-8, 10 and 11 and col. 6, lines 51-67).

It would have been obvious to one of ordinary skill in the art of business methods at the time of the invention to unite the known elements of a user interface with selectable portions enabling subscriber selection of configuration options and configuring the operating systems

based on the selections, as taught by Bandhole/Nanja, with the known elements of a server operable to provide computing services to subscribers, as taught by Tremain, as each element would have performed the same function in combination as it did separately. One ordinary skill in the art would have recognized that the combination of Franklin and Webber would yield the predictable results of allowing customers to customize their computing services based on their needs at that time, as suggested by Bandhole (¶¶0012 and 0057).

Referring to claim 4. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 1 wherein the configuration options also comprise selection of one or more application computer software programs from a plurality of application computer software programs and said server computer is further operable to configure said first virtual non-volatile storage with the selected application program (Bandhole, Fig. 4 and ¶¶0014, 0033, 0034, 0051, 0054 and 0055 and Nanja, col. 6, lines 57-64). One of ordinary skill in the art would have been motivated to do so based on the suggestion taught by Bandhole that doing so would allow for customers to customize their computing services based on the needs at that time (¶¶0012 and 0057).

Referring to claim 5. Tremain in view of Bandhole/Nanja teaches the apparatus of Claim 4 wherein said selected application computer software program comprises a word processing program (Bandhole, ¶¶0054 and 0055). One of ordinary skill in the art would have been motivated to do so based on the suggestion taught by Bandhole that doing so would allow for customers to customize their computing services based on the needs at that time (¶¶0012 and 0057).

Referring to claim 6. Tremain in view of Bandhole/Nanja teaches the apparatus of Claim 4 wherein said selected application computer software program comprises an electronic mail program (Bandhole, ¶0051). One of ordinary skill in the art would have been motivated to do so based on the suggestion taught by Bandhole that doing so would allow for customers to customize their computing services based on the needs at that time (¶¶0012 and 0057).

Referring to claim 7. Tremain in view of Bandhole/Nanja teaches the apparatus of Claim 4 but does not explicitly disclose wherein the computer programs comprise a spreadsheet computer program. Tremain and Bandhole/Nanja disclose wherein the computer software program can be applications, for example word processing programs or email programs, as discussed above (*see also* Tremain, ¶0051), but do not expressly show wherein the application is a spreadsheet programs. However, these differences do not distinguish the claimed apparatus from Tremain in view of Bandhole/Nanja. Claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, *see In re Danly* 263 F.2d 844, 847, 120 USPQ 582, 531 (CCPA 1959). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1657 (Bd. Pat. App. & Inter. 1987). Thus the structural limitations of claims 6 and 7, including a server capable of configuring the virtual storage with an application program, whether it be a word processing, spreadsheet, web hosting or email program, are taught in Tremain in view of Bandhole/Nanja, as described herein.

Referring to claim 9. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 1 wherein said server computer is further operable to configure said second non-volatile storage in accordance with configuration options paid for by said second subscriber (Bandhole, Figs. 4 and 5, and ¶¶0014, 0033, 0034, 0052, 0054 and 0059). One of ordinary skill in the art would have been motivated to do so based on the suggestion taught by Bandhole that doing so would allow customers to concurrently have access to their storage without others having access to it (¶0052).

Referring to claim 10. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 4 wherein said server computer is further operable to establish a communication session with a subscriber device used by said first subscriber and to execute said selected application computer software program stored in said first virtual non-volatile storage during said communication session (Tremain, Fig. 1 and ¶¶0169-0171 and Bandhole, Fig, 1C and ¶¶0038-0041).

Referring to claim 11. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 1 wherein said server computer is further operable to establish a communication session with a subscriber device used by said first subscriber and to interact with said subscriber device during said communication session via another user interface selectable by said first subscriber from a plurality of user interfaces (Tremain, Figs. 1 and 2, and ¶¶0169-0171 and 0174, Bandhole, ¶0043 and Nanja, col. 6, lines 57-64).

Referring to claim 12. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 11 wherein said server computer is further operable to receive data identifying a selection of the other user interface by said first subscriber from said plurality of user interfaces, and to cause the display of the other user interface on said subscriber device used by said first subscriber (Tremain, ¶0174).

Referring to claim 13. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 1 wherein said server computer is further operable to establish a communication session with a subscriber device used by said first subscriber and to interact with said subscriber device during said communication session via another user interface, and wherein said server computer is further operable to receive data identifying the other user interface as preferred to be utilized by said subscriber device and to cause the display of the other user interface on said subscriber device (Tremain, Figs. 1 and 2, ¶¶0169-0171 and 0174).

Referring to claim 14. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 4 wherein said server computer is further operable to configure said first virtual non-volatile storage with said selected application computer software program stored therein in accordance with a configuration option selected from the configuration options and paid for by said first subscriber through payment of a subscription fee (Tremain, ¶¶0044, 0051, 0131 and 0143 and Bandhole, ¶0052).

Referring to claim 15. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 1 wherein said server computer is further operable to configure said first virtual non-volatile storage to have a storage capacity corresponding to said first selected virtual non-volatile storage capacity selected by said first subscriber and paid for by said first subscriber through payment of a subscription fee (Tremain, ¶¶0044, 0051, 0131 and 0143 and Bandhole, ¶0052).

Referring to claim 17. Tremain in view of Bandhole/Nanja also teaches the apparatus of Claim 4 wherein said server computer is further operable to update said selected application computer software program of said first virtual non-volatile storage with revisions to said selected application computer software program in accordance with a configuration option selected by said first subscriber (Tremain, ¶0141).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tremain in view of Bandhole/Nanja and further in view of Hui, US 2003/0220983 (hereafter referred to as "Hui").

Referring to claim 16. Tremain in view of Bandhole/Nanja teaches the apparatus of Claim 4 as discussed above, but does not explicitly teach wherein said server computer is further operable to replace said selected application computer software program of said first virtual non-volatile storage with a newer version of said selected application computer software program in accordance with a configuration option selected from the configuration options by said first subscriber. Tremain and Bandhole/Nanja teach wherein the server is operable to update the

computer software program in accordance with a configuration option selected by the subscriber (Tremain, ¶0141).

Hui, in the same field of endeavor and/or pertaining to the same issue, discloses that it is old and well known in the art to periodically download newer versions of computer software programs (¶0005).

It would have been obvious to one of ordinary skill in the art of business methods at the time of the invention to unite the known elements of replacing the computer software during an update with a newer version, as taught by Hui, with the known elements of a server configured to provide computing services based on configuration options, as taught by Tremain/Bandhole/Nanja. One ordinary skill in the art would have recognized that the combination of Hui and Tremain/Bandhole/Nanja would yield the predictable results of allowing customers to utilize the updated version and all the improvements therein, leading to greater customer satisfaction.

Claims 18-22, 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banka et al., US 7,003,481 B2 (hereafter referred to as "Banka") in view of Bandhole/Nanja and further in view of Hui.

Referring to claim 18. Banka discloses a method for providing subscription-based virtual computing services to a subscriber, the method comprising the steps of:

- enrolling a subscriber in a subscription-based computing services program for the provision of virtual computing services to the subscriber under the subscription-based computing services program through a virtual non-volatile storage allocated uniquely to the subscriber and

accessible to the subscriber via a server computer during a communication session between the server computer and a subscriber device used by the subscriber, the virtual computing services corresponding to configuration options selectable by the subscriber (col. 5, lines 47-67 – note the enrollment occurs when the customer enters into a contract);

- exposing a user interface having a plurality of portions selectable by the subscriber to specify configuration options (Fig. 4 and col. 7, lines 34-61);
- enabling access to and use of the virtual non-volatile storage as desired by the subscriber via a server computer during a communication session between the server computer and the subscriber device (col. 5, lines 47-67 and col. 10, line 64 through col. 11, line 13); and
- charging the subscriber in accordance with selected configuration options received from the subscriber (col. 5, lines 47-67 – note the charging is the payment terms).

Banka does not disclose the configuration options comprising at least a virtual non-volatile storage capacity from at least tow storage capacity options, an operating system from at least two operating systems, said server computer operable to install a selected operating system to the virtual non-volatile storage to provide the virtual computing services, and whether the server computer is to automatically install available updates to the selected operating system.

Bandhole, in the same field of endeavor and/or pertaining to the same issue, teaches a system to provide virtual computing wherein the customer can choose the components and configuration for the computing environment from presented options comprising at least a virtual non-volatile storage capacity configuration and a plurality of operating systems, and wherein the virtual non-volatile storages are configured according to the selected options (Fig. 4 and ¶¶0014, 0033, 0034, 0051, 0054 and 0055 – note the virtual computing is the "dynamic computing

environment" or "DCE"). Bandhole teaches that an interface can be used to select the options, which can include storage and operating systems (¶¶0028 and 0054) and refers to the related application of Nanja. Nanja teaches a server computer operable to output an interface having one or more selectable portions to enable subscriber selection of configuration options for respective computing services comprising at least selection of non-virtual storage from at least two configuration options and selection of an operating system from an least two system options and installing the selected operating system to a non-virtual storage capacity having the selected storage capacity (Figs. 2, 5-8, 10 and 11 and col. 6, lines 51-67).

It would have been obvious to one of ordinary skill in the art of business methods at the time of the invention to unite the known elements of a user interface with selectable portions enabling subscriber selection of configuration options and configuring the operating systems based on the selections, as taught by Bandhole/Nanja, with the known elements of a method to provide subscription-based virtual computing services, as taught by Banka, as each element would have performed the same function in combination as it did separately. One ordinary skill in the art would have recognized that the combination of Banka and Bandhole/Nanja would yield the predictable results of allowing customers to customize their computing services based on their needs at that time, as suggested by Bandhole (¶¶0012 and 0057).

Furthermore, Hui, in the same field of endeavor and/or pertaining to the same issue, discloses that it is old and well known in the art to automatically download newer versions of computer software programs, i.e. updates (¶0005). It would have been obvious to one of ordinary skill in the art of business methods at the time of the invention to unite the known elements of replacing the computer software during an update with a newer version, as taught by

Hui, with the known elements of a server configured to provide computing services based on configuration options, as taught by Banka/Bandhole/Nanja. One ordinary skill in the art would have recognized that the combination of Hui and Banka/Bandhole/Nanja would yield the predictable results of allowing customers to utilize the updated version and all the improvements therein, leading to greater customer satisfaction.

Referring to claim 19, Banka in view of Bandhole/Nanja/Hui further teaches the method of Claim 18 wherein the step of enrolling comprises the steps of receiving selected configuration options from the subscriber via the subscriber device (Banka, col. 5, lines 47-67 and col. 9, lines 9-18 and Bandhole, ¶¶0033, 0034 and 0054), and configuring the virtual non-volatile storage in accordance with the selected configuration options received from the subscriber (Banka, col. 5, lines 47-67 and col. 10, line 64 through col. 11, line 13, and Bandhole, ¶¶0033, 0034 and 0054).

Referring to claim 20, Banka in view of Bandhole/Nanja/Hui further teaches the method of Claim 19 wherein one of the selected configuration options is indicative of the subscriber's desire to receive a virtual computing service including access to and use of the virtual non-volatile storage during a subsequent communication session with the subscriber, the non-volatile storage having storage capacity selected via the user interface, and wherein the step of configuring comprises a step of allocating the virtual non-volatile storage to the subscriber for access and use by the subscriber (Banka, col. 5, lines 47-67 and col. 10, line 64 through col. 11, line 13 and Nanja, col. 6, line 51 through col. 7, line 19).

Referring to claims 21 and 22. Banka in view of Bandhole/Nanja/Hui teaches the method of Claim 19 wherein one of the selected configuration options is indicative of the subscriber's desire to receive a virtual computing service including the use of an operating system or application computer software program that is installable into the virtual non-volatile storage of the subscriber for execution by a server computer during a subsequent communication session with the subscriber, and wherein the step of configuring comprises a step of installing the operating system or applicant computer software program in the virtual non-volatile storage of the subscriber for execution by a server computer and use by the subscriber during a subsequent communication session with the subscriber (Nanja, col. 6, lines 7-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the indication of the subscriber's desire to receive installation and to install such system as taught by Nanja for the predictable result of allowing for fast, efficient selection and configuration of virtual computing environments by ensuing a customer does not have to repeat steps for previously designated environments, as suggested by Nanja (col. 4, lines 14-30).

Referring to claim 29. Banka in view of Bandhole/Nanja/Hui further teaches the method of Claim 18 wherein the step of enrolling comprises the steps of:

- establishing a communication session with a subscriber device used by the subscriber (Banka, Figs. 3A and 3B, col. 6, lines 1-20 and 42-45);
- causing the display of the selectable configuration options at the subscriber device (Banka, Figs. 3A and 3B, col. 6, lines 42-45), the selectable configurable options comprising a plurality of storage capacity options of the virtual non-volatile storage, a plurality of operating

system options, and a plurality of application program options (Bandhole, ¶¶0014, 0033, 0034, 0051, 0054 and 0055) so that customers can concurrently have access to their storage without others having access to it, as disclosed by Bandhole (¶0052);

- receiving selected configuration options selected by the subscriber from the subscriber device (Banka, Figs. 3A and 3B, col. 6, lines 45-53);
- determining a cost to the subscriber associated with the provision of the virtual computing services associated with the selected configuration options (Banka, col. 5, lines 54-67);
- receiving data indicative of the subscriber's agreement to pay the cost associated with the provision of the virtual computing services associated with the selected configuration options (Banka, Figs. 3A and 3B, col. 6, lines 45-61);
- storing the selected configuration options (Banka, Fig. 9 and col. 12, lines 34-38); and
- terminating the communication session with the subscriber device (Banka, Figs. 3A and 3B, col. 6, lines 42-61);

Referring to claim 36. All of the limitations in apparatus claim 36 are closely parallel to the limitations of method claim 18, analyzed above and are rejected on the same bases.

Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banka in view of Bandhole/Nanja/Hui further in view of Tremain.

Referring to claims 23-26. Banka in view of Bandhole/Nanja/Hui teaches the method of Claim 18, as discussed above, wherein the step of enrolling comprises the steps of receiving

selected configuration options from the subscriber via the subscriber device (Banka, col. 5, lines 47-67), but does not disclose wherein one of the selected configuration options is indicative of the subscriber's desire to receive a virtual computing service including the automatic updating of an operating system computer software program stored in the virtual non-volatile storage of the subscriber with patches therefor, and wherein the method further comprises a step of automatically updating the operating system computer software program stored in the virtual non-volatile storage of the subscriber with patches therefor.

Tremain, as discussed above, discloses a method for providing virtual computing services including wherein one of the selected configuration options is indicative of the subscriber's desire to receive a virtual computing service including the automatic updating of an operating system computer software program stored in the virtual non-volatile storage of the subscriber, and wherein the method further comprises a step of automatically updating the operating system computer software program stored in the virtual non-volatile storage of the subscriber (¶0141). Hui teaches that it is old and well known in the art to download newer versions and patches of computer software programs (page 1, ¶0005).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the method of Banka/Bandhole/Nanja/Hui in view of Bandhole to include the teachings of Tremain to allow for one of the selected configuration options to be indicative of the subscriber's desire to receive a virtual computing service including the automatic updating of an operating system computer software program stored in the virtual non-volatile storage of the subscriber with patches therefor, and wherein the method further comprises a step of automatically updating the operating system computer software program

stored in the virtual non-volatile storage of the subscriber with patches therefore and wherein the automatic updating is done with either newer versions or patches to the program. One of ordinary skill in the art would have been motivated to do so based on the suggestion taught by Tremain that doing so would increase the flexibility and options of virtual computing in a way to increase customer satisfaction and use of the services (¶0148).

Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banka in view of Bandhole/Nanja/Hui/Tremain and further in view of Forster, US 2004/0220980 A1 (hereafter referred to as "Forster").

Referring to claims 27 and 28. Banka in view of Bandhole/Nanja/Hui/Tremain teaches the method of Claim 18, as discussed above, wherein the step of enrolling comprises the steps of receiving selected configuration options from the subscriber via the subscriber device (Banka, col. 5, lines 47-67), but does not disclose wherein one of the selected configuration options is indicative of the subscriber's desire to receive a virtual computing service including the automatic nightly or weekly backup of the virtual non-volatile storage of the subscriber, and wherein the method further comprises a step of automatically backing up the virtual non-volatile storage of the subscriber on a nightly basis.

Tremain, as discussed above, discloses a method for providing virtual computing services including wherein one of the selected configuration options is indicative of the subscriber's desire to receive a virtual computing service including the automatic nightly backup of the virtual non-volatile storage of the subscriber, and wherein the method further comprises a step of automatically backing up the virtual non-volatile storage of the subscriber (¶¶0109-0112).

It would have been obvious to one of ordinary skill in the art of business methods at the time of the invention to unite the known elements of allowing for one of the selected configuration options to be indicative of the subscriber's desire to receive automatic backup of the virtual non-volatile storage of the subscriber, and the step of automatically backing up the virtual non-volatile storage of the subscriber on a nightly basis, as taught by Tremain, with the known elements of Banka and Bandhole as each element would have performed the same function in combination as it did separately. One ordinary skill in the art would have recognized that the combination of Tremain and Banka/Bandhole would yield the predictable results of increasing the flexibility and options of virtual computing in a way to increase customer satisfaction and use of the services, as suggested by Tremain (¶0148).

Forster, in the same field of endeavor and/or pertaining to the same issue, discloses periodically backing up storage on a nightly or weekly basis (¶0031). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the step of periodically backing up storage on a nightly or weekly basis, as taught by Forster, to improve the automatic backing up method of Tremain/Banka/Bandhole for the predictable result of ensuring that in the case of a computer malfunction or other problem, all data are recoverable from the backup, saving the customer time and increasing his satisfaction.

Claims 30-35 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banka in view of Bandhole/Nanja/Hui and further in view of Whitney, US 2003/0115442 A1, cited by Applicant (hereafter referred to as "Whitney").

Referring to claim 30. Banka in view of Bandhole/Nanja/Hui teaches the method of Claim 18 wherein the step of enabling access to and use of the virtual non-volatile storage comprises the steps of: establishing a communication session with a subscriber device used by the subscriber for the communication session (Banka, col. 6, lines 1-20 and 42-45); performing a task associated with the received user interface option (Banka, col. 6, lines 54-61); and terminating the communication session with the subscriber device (Banka, col. 6, lines 42-61). Banka et al. does not disclose determining a preferred user interface for use by the subscriber device to interact with the virtual non-volatile storage, the preferred user interface having a plurality of user interface options selectable by the subscriber using the subscriber device and corresponding to respective performable tasks; causing the display of the preferred user interface at the subscriber device; and receiving a user interface option selected from the displayed user interface by the subscriber.

Whitney, in the same field of endeavor and/or pertaining to the same issue, discloses a method of managing a logical partition on logically-partitioned multi-user computer, including determining a preferred user interface for use by the subscriber device, the preferred user interface having a plurality of user interface options selectable by the subscriber using the subscriber device and corresponding to respective performable tasks; causing the display of the preferred user interface at the subscriber device; and receiving a user interface option selected from the user interface by the subscriber (¶0051).

It would have been obvious to one of ordinary skill in the art of business methods at the time of the invention to unite the known elements of determining a preferred user interface for use by the subscriber device, the preferred user interface having a plurality of user interface options selectable by the subscriber using the subscriber device and corresponding to respective performable tasks; causing the display of the preferred user interface at the subscriber device; and receiving a user interface option selected from the user interface by the subscriber, as taught by Whitney, with the known elements of the method taught by Banka/Bandhole/Nanja/Hui, as each element would have performed the same function in combination as it did separately. One ordinary skill in the art would have recognized that the combination of the prior art would yield the predictable results of facilitating communication between the user and server, increasing customer satisfaction.

Referring to claim 31, Banka in view of Bandhole/Nanja/Hui/Whitney teaches the method of Claim 30, as discussed above, wherein the step of determining comprises the steps of: collecting information from the subscriber device indicative of the subscriber device type while establishing the communication session with the subscriber device; and ascertaining the user interface most often used with the subscriber device type (Banka, col. 10, lines 30-60).

Referring to claim 32, Banka in view of Bandhole/Nanja/Hui/Whitney teaches the method of Claim 30, as discussed above, wherein the step of determining comprises a step of receiving a selection of a user interface from the subscriber via the subscriber device during the

communication session indicative of the user interface that the subscriber desires to use at the subscriber device (Banka, col. 10, lines 30-60).

Referring to claims 33-35. Banka in view of Bandhole/Nanja/Hui/Whitney teaches the method of Claim 30, as discussed above, wherein the step of performing comprises the steps of: determining whether the task associated with the received user interface option corresponds to a data file upload, download or execute task; and upon determining that the task associated with the received user interface option corresponds to a data file upload, download or execute task, causing the uploading of a data file from the subscriber device to the virtual non-volatile storage of the subscriber (Whitney, pages 5-6, ¶0056) in order to facilitate the virtual computing.

Referring to claims 37-40. All of the limitations in apparatus claims 37-40 are closely parallel to the limitations of method claims 30-32 and 35, analyzed above and are rejected on the same bases.

Response to Arguments

Applicant's arguments filed March 21, 2008 have been fully considered but they are not persuasive. Applicant argues essentially that Bandhole and Nanja do not cure the deficiencies of Tremain of a user interface having one or more selectable portions to enable subscriber selection of configuration options and then configuring the virtual environment according to those selections, because Bandhole and Nanja only deal with preconfigured environments and thus do not enable configuring environments based on selections (Remarks, pages 4-28). The examiner

disagrees. Regarding applicant's argument that Nanja only shows a preconfigured resource (Remarks, pages 24-26), the examiner responds that Nanja is shown for the limitation of a user interface from which to make selections. In fact, Bandhole provides for a graphical interface from which to make selections of configurations (¶¶0035 and 0036), and refers to Nanja for more support regarding that portion of the invention. Thus, Nanja along with Bandhole shows using graphical user interfaces from which the user can make configuration options. Furthermore, while Nanja was directed to an invention in which virtual environments were preconfigured, it predates Bandhole. Bandhole cures those deficiencies of Nanja and as a related application, shows that Nanja can be applied to situations in which virtual environments are not preconfigured.

Regarding applicant's argument that Bandhole is directed only to preconfigured virtual environments (Remarks, pages 27-31), the examiner disagrees. Bandhole specifically provides for a customer configuring an environment and not simply picking a preconfigured environment. For example, Bandhole states:

> The present invention enables the separation of the activity of designing a DCE, from the activity of actually creating the DCE. Designing a DCE includes choosing the specific hardware, choosing the operating systems or other software, and choosing the specific interconnections, etc. Creating a DCE includes allocating the resources, installing the operating systems and other software, etc. Furthermore, the present invention automates the process of creating the DCE. A DCE for which resources have not been allocated yet will also be referred to as a virtual computing environment. Similarly, a computing device (or a subnet) that is part of a DCE also be referred to as a virtual computing device (or a virtual subnet).
>
> ***
>
> The present invention provides a framework that enables configuring, provisioning, accessing and managing DCEs

> remotely. Configuring a DCE involves choosing the resources and their interconnections. The present invention supports operations for making such design choices through appropriate programmable interfaces. The interfaces can be used interactively through a graphical user interface such as a web page or non-interactively through a program script. Provisioning a DCE involves allocation of physical resources required for a DCE to function. The present invention manages the physical resources needed for provisioning DCEs and supports operations for allocating/de-allocating these resources.

(¶¶0034-0035).

Thus, Bandhole is directed to allowing customers to select configurations of environments and then providing the environments according to the selections.

Applicant places a considerable amount of importance on one aspect of Bandhole in which a customer may pick a pre-configured component (¶0055) but fails to consider the remainder of the paragraph that distinctly states that aspect is but one embodiment wherein the customer can save an environment the customer configured previously as a pre-configured component (¶0055, "[e]ach customer can save the environment configured as a pre-configured component"). Bandhole states prior that the customer may, as part of this one embodiment, select certain components and the system would create the environment using abstractions comprised of CPU storage, operations systems, applications software, network switches, etc. (¶0054). Bandhole further states that the user may specify specific abstractions, for example "the Apache web server software has to run on Linux web servers; or that the web servers and application server(s) must be connected to the same network," or as an alternate, use abstractions for pre-configured components (¶0055). Applicant misconstrues this section as providing users only with the option to select a pre-configured device (Remarks, pages 29-30). Assuming arguendo that this paragraph does provide that, it is still only one alternate embodiment.

In response to applicant's argument that the examiner fails to provide full development of the reasons why the prior art Tremain shows the limitations of the claims (Remarks, pages 32-33), the examiner disagrees and reasserts that the sections of Tremain cited as well as the document as whole teaches the limitations. Applicant's arguments that Tremain fails to show the limitations of claims 4-6, 9-15 and 17 (Remarks, page 33) is an attempt to argue against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Claims 4-6, 9-15 and 17 are rejected based on the combination of Tremain, Bandhole and Nanja.

In response to applicant's argument that Hui fails to teach "replac[ing] said selection application computer software program in accordance with a configuration option selection from the configuration options by said first subscriber," (Remarks, pages 35-36), applicant is attempting to argue against the references individually where both Tremain and Hui teach that limitation. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's arguments regarding claim 18 that Banka fails to teach enrolling a subscriber in a subscription-based computing services program for the provision of virtual computing services to the subscriber under the subscription-based computing services program through a virtual non-volatile storage allocated uniquely to the subscriber and accessible to the subscriber via a server computer during a communication session between the server

computer and a subscriber device used by the subscriber, the virtual computing services corresponding to configuration options selectable by the subscriber because Banka fails to teach a virtual non-volatile storage allocated uniquely to the subscriber and enabling access to the storage (Remarks, pages 39-44), a recitation of the intended use of the claimed invention must result in a structural and functional difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art functionally is capable of performing the intended use, then it teaches the claim. Banka teaches the step of enrolling a subscriber in a subscription-based computing services program for the purpose of virtual computing services through a non-volatile storage. The examiner further notes that claims are interpreted in the broadest reasonable manner as best understood by one of ordinary skill in the art. If applicant intended the claim to be interpreted in a different way, the claims should better reflect that interpretation. Banka, as discussed above, teaches enabling access to non-volatile storage (col. 11, lines 1-11, note the storage is included in the server and applications to which the user has access enabled by the subscription). Furthermore, claim 18 is taught by both Banka and Bandhole, and one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that the references Banka and Bandhole teach away from the present invention because Bandhole is directed to preconfigured resources (Remarks, page 46), the examiner directs applicant to the discussion supra regarding its mischaracterization of Bandhole. Neither Banka nor Bandhole criticizes, discredits, or otherwise discourages

allocating virtual non-volatile storage uniquely to a subscriber, assuming *arguendo* that such a claim limitation exists that is not the intended use/purpose of the enrolling a subscriber. *See* MPEP §2141.02.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lakshman, US 7,093,113 B2, teaches a system and method for customers to create dynamic computing environments by selecting the desired resources and configurations and then having the system allocate those resources based on the configurations selected (e.g. Abstract, Fig. 1 and columns 4-12).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amee A. Shah whose telephone number is (571)272-8116. The examiner can normally be reached on Flex-time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Smith can be reached on 571-272-6763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey A. Smith/
Supervisory Patent Examiner, Art Unit 3625

AAS

June 4, 2008